



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/831,798

05/14/2001

Reinhard Janssen

3926.027

9978

7590

07/15/2004

Stephan A Pendorf
Pendorf & Cutliff
5111 Memorial Highway
Tampa, FL 33634-7356

EXAMINER

PATEL, SHEFALI D

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,798

Applicant(s)

JANSSEN ET AL.

Examiner

Shefali D Patel

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-26 and 28-49 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/DE99/03627 filed on 11/13/1999. A copy of the foreign priority (GERMANY 198 52 631.8) has been received in the current application.

Drawings

2. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a). Failure to timely submit a drawing will result in **ABANDONMENT** of the application.

Specification

3. Once the drawings are submitted, as required, applicant will need to include a brief description of the drawings in the specification with no new matter.

Content of Specification

(a) Brief Description of the Several Views of the Drawing(s):

See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

4. The abstract of the disclosure is objected to because line 8 discloses the word "said". Correction is required. See MPEP § 608.01(b).

Art Unit: 2621

5. On page 1 lines 3-4, the recitation of claims 1-10 is improper since the claim numbering have been changed in the preliminary amendment. The examiner suggests not including any claim numbers in the specification since the claim numbering might change during prosecution.

Claim Rejections - 35 USC § 112

6. Claims 33 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 33 and 45 recites the limitation "the class" in line 2 of claims 33 and 45. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 24, 35-37, 38, 47-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 59-61 of copending Application No. 09/831,803. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 24 and 35 claims similar elements as

Art Unit: 2621

disclosed in claim 59 of the copending application. Please note that claim 24 recites, “utilizing information originating from at least one of (a) a map-based navigation system and (b) a traffic information system...” Claim 59 in the copending application discloses a traffic information system as well as elements from claim 35. Basically claim 59 of copending application is a combination of claims 24 and 35 of the current application.

10. Claims 36-37 are identical to claims 60-61 of the copending application and are rejected for the same reasons.

11. Claims 38, 47-49 recites identical features as claims 24, 35-37, respectively. Thus, arguments similar to that presented above for claims 24, 35-37 is equally applicable to claims 38, 47-49.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 24-25, 28-34, 38-39, 41-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Piccioli et al. (“Robust method for read sign detection and recognition,” Image Vision Computing, 25 August 1995) (hereinafter “Piccioli”).

With regard to **claim 24** Piccioli discloses a process for improving performance of a system for recognizing traffic signs (See abstract), said system including a camera (page 210, col. 1, section 2. lines 1-2) and a therewith associated evaluation unit for image recognition or image display (evaluation unit for recognizing the unit and there within a traffic sign as disclosed on page 210 under section 3 and 3.1), said process comprising: utilizing information originating from at least one of (a) a map-based navigation system and (b) a traffic information system in the evaluation or display of contents of traffic signs (traffic information system as disclosed on pages 210-216 where in the beginning of the section 3 the three steps are described for the system).

With regard to **claim 25** Piccioli discloses the system for recognition and/or display of traffic signs is in communication with (the map-based navigation system or) the traffic information system via an onboard data bus (On page 210 under section 2, Piccioli discloses that the system is mounted on a vehicle which is inherently in communication with the data bus).

With regard to **claim 28** Piccioli discloses the characters, the type or the position or the condition of the visibility or the size of a recognized traffic sign is stored in a data storage unit associated with the traffic information system on page 216 second column under section 3.3 fourth paragraph where in Figure 10(e) the database related to the traffic signs are discussed.

With regard to **claim 29** Piccioli discloses emitting a signal on a display for already traveled road segment since Piccioli discloses a storage unit as discussed in claim 28 above that stores the images of the road (including a traffic signs) and it is inherent that once the road is stored in the database, the system knows that the road has been traveled on.

Claim 30 recites identical features as claim 28. Thus, arguments similar to that presented above for claim 28 is equally applicable to claim 30.

Claim 31 recites identical features as claim 29. Thus, arguments similar to that presented above for claim 29 is equally applicable to claim 31.

With regard to **claim 32** Piccioli discloses a predetermined traveled path on page 210 column 2 section 3.1.1.

With regard to **claim 33** Piccioli discloses the classification of traffic sign on page 210 column 2 section 3.1.2. step 1.

With regard to **claim 34** Piccioli discloses traveled paths are programmed into a data storage unit by first clustering and then storing in the database as discussed on page 211 column 1 step 2-3 and page 216 column 2 section 3.3 fourth paragraph in figure 10(e).

Claim 38 recites identical features as claim 24. Thus, arguments similar to that presented above for claim 24 is equally applicable to claim 38.

Claim 39 recites identical features as claim 25. Thus, arguments similar to that presented above for claim 25 is equally applicable to claim 39.

Claim 41 recites identical features as claim 30. Thus, arguments similar to that presented above for claim 30 is equally applicable to claim 41.

Claim 42 recites identical features as claim 28. Thus, arguments similar to that presented above for claim 28 is equally applicable to claim 42.

Claim 43 recites identical features as claim 29. Thus, arguments similar to that presented above for claim 29 is equally applicable to claim 43.

Claim 44 recites identical features as claim 32. Thus, arguments similar to that presented above for claim 32 is equally applicable to claim 44.

Claim 45 recites identical features as claim 33. Thus, arguments similar to that presented above for claim 33 is equally applicable to claim 45.

Claim 46 recites identical features as claim 34. Thus, arguments similar to that presented above for claim 34 is equally applicable to claim 46.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 26 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piccioli ("Robust method for read sign detection and recognition," Image Vision Computing, 25 August 1995) in view of Escalera et al. ("Road Traffic Sign Detection and Classification", IEEE, December 1997) (hereinafter, "Escalera").

With regard to **claim 26** Piccioli discloses all of the elements recited in claim 24 as mentioned above. Piccioli does not expressly disclose the vehicle passing through an area in which recognition of traffic signs may be problematic by having the system for traffic sign recognition that is capable of operating at a normal performance level and enhanced performance level. Escalera discloses this on page 849 under section II first paragraph where the warning and the prohibition signs are disclosed. Piccioli and Escalera are combinable because they are from the same field of endeavor, traffic sign recognition. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Escalera with

Piccioli. The motivation for doing so is to recognize the problematic signs and alert the car driver. Therefore, it would have been obvious to combine Escalera with Piccioli to obtain the invention as specified in claim 26.

Claim 40 recites identical features as claim 26. Thus, arguments similar to that presented above for claim 26 is equally applicable to claim 40.

Allowable Subject Matter

16. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest prior art to Piccioli and Escalera are directed to a process for improving performance of a system for recognizing traffic signs as disclosed in independent claims 24 and 38. However, the closest prior art fails to disclose anything about a processing wherein within said problematic areas supplemental subdivided recognition processes are carried out, comprising: a) when entering or leaving communities, carrying out a specific search for signs indicating entry of a community and leaving of a community, b) when in the area of traffic influencing facilities, changing signs or traffic lights, searching for any change in the type and manner of the representation of the traffic signs, c) when in an area in which poor visibility due to fog or rain may be present and a higher probability of contrast-poor images may be required, effecting an increase in the contrast enhancement of the image data as disclosed in claim 27. It is for these reasons in combination with all the other elements of the claim that claims 27 would be

Art Unit: 2621

allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,266,442 – In video data, therein objects are susceptible to detection, classification, and ultimately identification by filtering video data for certain differentiable characteristics of objects.

US 6,466,260 – Traffic Surveillance System

Kehtarnavaz, et al., "Traffic Sign Recognition in Noisy Outdoor Scenes," Intelligent Vehicles, IEEE, 25-26 september 1995, pp. 460-465.

Estevez, et al., "A Real-Time Histogrammic Approach to Road Sign Recognition," Image Analysis and Interpretation, 8-9 April 1996, IEEE, pp. 95-100.

Janssen, et al., "Hybrid Approach for Traffic Sign Recognition," Intelligent Vehicles, IEEE, 14-16 July 1993, pp. 390-395.

Priese, et al., "New Results on Traffic Sign Recognition," Intelligent Vehicles, IEEE, 24-26 October 1994, pp. 249-254.

Priese, et al., "Ideogram Identification in a Realtime Traffic Sign Recognition System," Intelligent Vehicles, IEEE, 25-26 september 1995, pp. 310-314.

Estable, et al., "A Real-Time Traffic Sign Recognition System," Intelligent Vehicles, IEEE, 24-26 October 1994, pp. 213-218.

Art Unit: 2621

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D Patel whose telephone number is 703-306-4182. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DANIEL MARIAM
PRIMARY EXAMINER

July 8, 2004

Shefali D Patel
Examiner
Art Unit 2621